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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,201	12/23/2005	Yoshio Taniguchi	740709-547	4128

22204 7590 03/17/2008

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EXAMINER	
HOLLWEG, THOMAS A	

ART UNIT	PAPER NUMBER
2879	

MAIL DATE	DELIVERY MODE
03/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,201	TANIGUCHI ET AL.	
	Examiner	Art Unit	
	Thomas A. Hollweg	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/8/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on January 8, 2007, is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

2. The following claims are objected to because of the following informalities:

a. Regarding claims 1, 5, 10 and 16, the phrase " in order" is confusing. For examination purposes, it is assumed that this phrase means "in stated order," or "in listed order."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 16-17 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Carcia et al., U.S. Patent Application Publication No. 2003/0164497 A1.

5. With regard to claim 1, in figure 4, Carcia discloses an organic electroluminescence element comprising on a surface of a transparent substrate (21B), a transparent electrode layer (30), an organic material layer (40) including a light-emitting organic material layer, an opaque electrode layer (50), an insulating layer (61B), a metal layer (62) and a resin film (61A) in order [0031, 0038, 0044, 0045].

6. With regard to claim 2, in figure 4, Carcia discloses that the metal layer (62) has a thickness in the range of 10 to 500 nm [0045].

7. With regard to claim 16, in figure 4, Carcia discloses an organic electroluminescence element comprising on a surface of a transparent substrate (21B), a transparent electrode layer (30), an organic material layer (40) including a light-emitting organic material layer, an opaque electrode layer (50), a resin film (61B) and a metal layer (62) in order [0031, 0038, 0044, 0045].

8. With regard to claim 17, in figure 4, Carcia discloses that the metal layer (62) has a thickness in the range of 10 to 500 nm [0045].

9. With regard to claim 21, in figure 4, Carcia discloses an electrode film comprising an opaque electrode layer (50) on a surface of a resin film (61B) and a metal layer (62) on a back surface of the resin film (61B) [0031, 0038, 0044, 0045].

10. With regard to claim 22, in figure 4, Carcia discloses that the metal layer (62) has a thickness in the range of 10 to 500 nm [0045].

11. Claims 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Graff et al., U.S. Patent No. 6,570,325 B2.

12. With regard to claim 9, in figure 3, Graff discloses an electrode film comprising on a surface of a resin film (350), a metal layer (345), an insulating layer (340) and an opaque electrode layer (top layer of 335) in order (col. 5, line 39 – col. 6, line 54).

13. With regard to claim 10, in figure 3, Graff discloses that the metal layer (345) has a thickness in the range of 10 to 500 nm (col. 5, line 8).

14. With regard to claim 11, in figure 3, Graff discloses that the insulating layer (340) has a thickness in the range of 10 to 1,000 nm (col. 5, line 9).

15. With regard to claim 12, in figure 3, Graff discloses that another metal layer (360) is further provided on a back surface of the resin film (350) (col. 5, lines 61-64).

16. With regard to claim 13, in figure 3, Graff discloses an electrode film comprising on a surface of a resin film (355), a metal layer (365), an insulating layer (350) and an opaque electrode layer (top layer of 335) in order, anther metal layer (345) and another insulating layer (340) are provided between the insulating layer (350) and the opaque electrode layer (top layer of 335), said another metal layer (345) and said another insulating layer (340) being arranged in order from the insulating layer (350) (col. 5, line 39 – col. 6, line 54).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 1-5, 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graff, in view of Carcia.

19. With regard to claim 1, in figure 3, Graff discloses an organic electroluminescence element (300) comprising on a surface of a transparent substrate (305), a light emitting device layer (335), an insulating layer (350), a metal layer (360) and a resin film (355) in order (col. 5, line 61 – col. 6, line 54). Graff is silent as to the specific components of the light emitting device layer.

20. Carcia, in figure 4, discloses an organic electroluminescence element having a sealing layer comprising an insulating layer (61B), a metal layer (62) and a resin film (61A), where the sealing layer is disposed on a light emitting device layer comprising a transparent electrode layer (30), an organic material layer (40) including a light-emitting organic material layer, an opaque electrode layer (50) [0031, 0038, 0044, 0045].

21. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Graff electroluminescence element where the light emitting device layer comprises a transparent electrode layer, an organic material layer including a light-emitting organic material layer, an opaque electrode layer, as taught by Carcia. Organic electroluminescent devices, commonly constructed of these layers, efficiently generate light and are capable of being employed in display devices.

22. With regard to claim 2, in figure 3, Graff discloses that the metal layer (360) has a thickness in the range of 10 to 500 nm (col. 5, line 8).

23. With regard to claim 3, in figure 3, Graff discloses that the insulating layer (350) has a thickness in the range of 10 to 1,000 nm (col. 5, line 9).

24. With regard to claim 4, in figure 3, Graff discloses that another metal layer (365) is provided on a surface of the resin film (355) (col. 5, lines 61-64).

25. With regard to claim 5, in figure 3, Graff discloses that another insulating layer (340) and another metal layer (345) are provided between the opaque electrode layer (top layer of 335) and the insulating layer (350), said another insulating layer (340) and said another metal layer (345) being arranged in order from the opaque electrode layer (col. 5, lines 61-63).

26. With regard to claim 8, the structural limitations therein are the same as those recited in claim 1, and those disclosed by Graff and Carcia above. In addition, Graff teaches that several layers of the many layer organic electroluminescent element can be assembled and subsequently laminated to other multilayer sub-assembles. Further, Graff teaches that these sub-assemblies can be laminated together through heating and applying pressure (col. 9, line 5 - col. 10, line 14).

27. Although neither Graff nor Carcia specifically disclose applicant's order of assembling the organic electroluminescent element, because all of the structural limitations of the device are disclosed by Graff and Carcia, and the claimed means of assembling the device is taught by Graff, at the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the organic electroluminescent device with the method of claim 8, since the method steps are obvious in light of the disclosed structure and the disclosed means of assembly.

28. With regard to claim 20, the structural limitations therein are the same as those recited in claim 16, and those disclosed by Carcia above. In addition, Graff teaches that

several layers of the many layer organic electroluminescent element can be assembled and subsequently laminated to other multilayer sub-assembles. Further, Graff teaches that these sub-assemblies can be laminated together through heating and applying pressure (col. 9, line 5 - col. 10, line 14).

29. Although neither Graff nor Carcia specifically disclose applicant's order of assembling the organic electroluminescent element, because all of the structural limitations of the device are disclosed by Carcia, and the claimed means of assembling the device is taught by Graff, at the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the organic electroluminescent device with the method of claim 20, since the method steps are obvious in light of the disclosed structure and the disclosed means of assembly.

30. Claims 6-7, 18-19, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carcia, as applied to the 35 U.S.C. 102(e) rejection of claims 1, 16 and 21 above, in view of Yamashita et al., U.S. Patent No. 5,189,405.

31. With regard to claim 6, all of the limitations are disclosed by Carcia, including that the insulating (61B) and resin (61A) layers may include functional additives [0039], and that additional layers may be include in the device for protection of the device components [0074]. However, Carcia does not expressly disclose that the insulating layer comprises a hygroscopic material.

32. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (4) comprising a hygroscopic

material (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Carcia organic electroluminescent element where the insulating layer comprises a hygroscopic material, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime

33. With regard to claim 7, all of the limitations are disclosed by Carcia, including that the insulating (61B) and resin (61A) layers may include functional additives [0039], and that additional layers may be include in the device for protection of the device components [0074]. However, Carcia does not expressly disclose that a hygroscopic material layer is provided between the insulating layer and the metal layer.

34. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (4) comprising a hygroscopic material (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Carcia organic electroluminescent element where a hygroscopic material layer is provided between the insulating layer and the metal layer, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime.

35. With regard to claim 18, Carcia discloses all of the limitations, including that additional layers may be include in the device for protection of the device components

[0074] However, Carcia does not expressly disclose that an insulating hygroscopic material layer is provided between the opaque electrode layer and the resin film.

36. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (4) comprising a hygroscopic material (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Carcia organic electroluminescent element where an insulating hygroscopic material layer is provided between the opaque electrode layer and the resin film, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime.

37. With regard to claim 19, Carcia discloses all of the limitations, including that additional layers may be include in the device for protection of the device components [0074] However, Carcia does not expressly disclose that an insulating layer and a hygroscopic material layer are provided between the opaque electrode layer and the resin film, said insulating layer and said hygroscopic material layer being arranged in order from the opaque electrode layer.

38. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (3) and a hygroscopic material layer (4) (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Carcia organic electroluminescent

element where an insulating layer and a hygroscopic material layer is provided between the opaque electrode layer and the resin film, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime.

39. With regard to claim 23, Carcia discloses all of the limitations, including that additional layers may be include in the device for protection of the device components [0074] However, Carcia does not expressly disclose that an insulating hygroscopic material layer is provided between the resin film and the opaque electrode layer.

40. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (4) comprising a hygroscopic material (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Carcia organic electroluminescent element where an insulating hygroscopic material layer is provided between the resin film and the opaque electrode layer, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime.

41. With regard to claim 24, Carcia discloses all of the limitations, including that additional layers may be include in the device for protection of the device components [0074] However, Carcia does not expressly disclose that a hygroscopic material layer and an insulating layer are provided between the resin film and the opaque electrode

layer, said hygroscopic material layer and said insulating layer being arranged in order from the resin film.

42. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (3) and a hygroscopic material layer (4) (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Carcia organic electroluminescent element where a hygroscopic material layer and an insulating layer are provided between the resin film and the opaque electrode layer, said hygroscopic material layer and said insulating layer being arranged in order from the resin film, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime.

43. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graff, as applied to the 35 U.S.C. 102(b) rejection of claim 9 above, in view of Yamashita.

44. With regard to claim 14, all of the limitations are disclosed by Graff, including that the insulating layers, metal layers and resin layers can be arranged in a variety of configurations (see figures 1, 2, & 3). However, Graff does not expressly disclose that the insulating layer comprises a hygroscopic material.

45. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (4) comprising a hygroscopic

material (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Graff organic electroluminescent element where the insulating layer comprises a hygroscopic material, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime

46. With regard to claim 15, all of the limitations are disclosed by Graff, including that the insulating layers, metal layers and resin layers can be arranged in a variety of configurations (see figures 1, 2, & 3). However, Graff does not expressly a hygroscopic material layer is provided between the metal layer and the insulating layer.

47. Yamashita, in figure 1, discloses an electroluminescent device having an electroluminescent active layer (1) covered by a sealing layer (5), which includes a metal layer (51), and further includes an insulating layer (4) comprising a hygroscopic material (col. 3, lines 3-7). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Graff organic electroluminescent element where a hygroscopic material layer is provided between the insulating layer and the metal layer, as taught by Yamashita. This would provide further protection for the environmentally sensitive components of the EL device, providing durability and a longer operational lifetime.

Conclusion

48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Hollweg whose telephone number is (571)

270-1739. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm E.S.T..

49. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

50. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TH/

/Nimeshkumar Patel/
Supervisory Patent Examiner, Art Unit 2879